Power supplies

File: power_supplies.kicad_sch

MCU IO Part 1

File: mcu_io_1.kicad_sch

Board-to-Board

File: board-to-board.kicad_sch

MCU IO Part 2

File: mcu_io_2.kicad_sch

Sensors

File: sensors.kicad_sch

MCU IO USB & Power

File: mcu_usb_power.kicad_sch

Communication

File: communication.kicad_sch

Ethernet PHY

File: ethernet_phy.kicad_sch

https://github.com/CDFER/JLCPCB-Kicad-Library/tree/main

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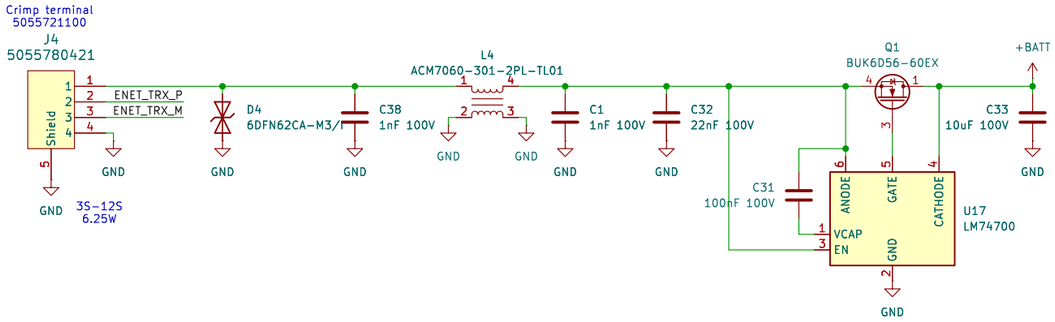
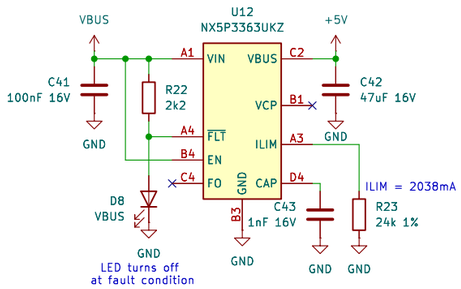
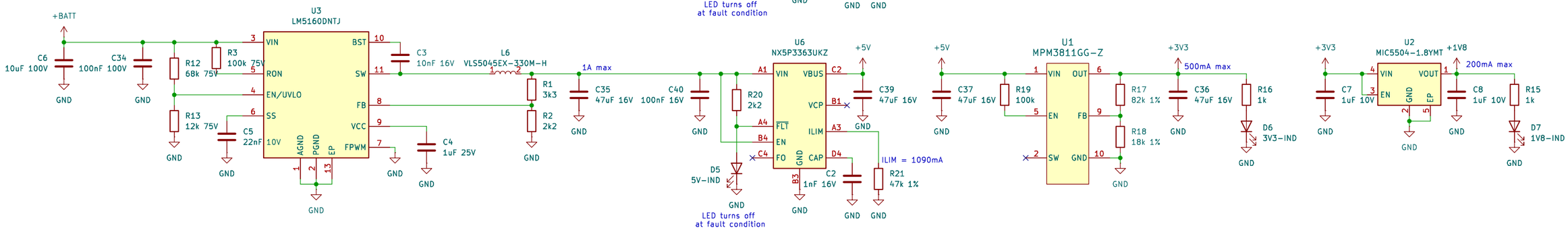
Sheet: /
File: spinali_mcxn_t1_sensor_hub.kicad_sch

Title: MR-MCXN-T1 Sensor hub

Size: A4	Date: 2025-01-17	**Rev: X0**
KiCad E.D.A. 8.0.8		Id: 1/9







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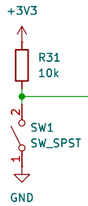
Sheet: /Power supplies/
File: power_supplies.kicad_sch

Title: MR-MCXN-T1 Sensor hub

Size: A3	Date: 2025-01-17	**Rev: X0**
KiCad E.D.A. 8.0.8		Id: 2/9



P0_0/DEBUG_TMS_SWDIO	A17
P0_1/DEBUG_TCLK_SWCLK	A16
P0_2/DEBUG_TDO_SWO	B16
P0_3/DEBUG_TDI	B15
P0_4	B14
P0_5	A14
P0_6/ISPMODE_N	C14
P0_7/FC0_P3	C13
P0_8/FLEXIO0_D0	C12
P0_9/FLEXIO0_D1	A12
P0_10	B12
P0_11	B11
P0_12/FC1_P4	D11
P0_13/FC1_P5	F12
P0_14/FC1_P6	E11
P0_15	G13
P0_16/FC0_P0	B10
P0_17/FC0_P1	A10
P0_18/FC0_P2	C10
P0_19	C9
P0_20/I3C0_SDA	C8
P0_21/I3C0_SCL	A8
P0_22/FC0_P6	B8
P0_23/CMP2_IN2	B7
P0_24/FC1_P0	B6
P0_25/FC1_P1	A6
P0_26/FC1_P2	F10
P0_27/FC1_P3	E10
P0_28	E8
P0_29	F8
P0_30	E7
P0_31/ENET0_WAKE_IN_OUT	D7

P0_0/TMS/SWDIO/FC1_P0/CT_INP0
P0_1/TCLK/SWCLK/FC1_P1/CT_INP1
P0_2/TDO/SWO/FC1_P2/CT0_MAT0/UTICK_CAP0/I3C0_PUR
P0_3/CMP1_IN1/TDI/FC1_P3/CT0_MAT1/UTICK_CAP1/HSCMP0_OUT
P0_4/TSI0_CH8/EWM0_IN/FC0_P0/FC1_P4/CT0_MAT2/UTICK_CAP2/HSCMP1_OUT/PDM0_CLK/WUU0_IN0
P0_5/TSI0_CH9/EWM0_OUT_b/FC0_P1/FC1_P5/CT0_MAT3/UTICK_CAP3/PDM0_DATA0
P0_6/TSI0_CH10/ISPMODE_N/FC0_P2/FC1_P6/CT_INP2/HSCMP2_OUT/PDM0_DATA1/CLKOUT
P0_7/CMP2_IN1/FC0_P3/CT_INP3/WUU0_IN1
P0_8/ADC0_B8/FC0_P4/CT_INP0/FLEXIO0_D0
P0_9/ADC0_B9/FC0_P5/CT_INP1/FLEXIO0_D1
P0_10/ADC0_B10/FC0_P6/CT0_MAT0/FLEXIO0_D2
P0_11/ADC0_B11/CT0_MAT1/FLEXIO0_D3/HSCMP2_OUT
P0_12/ADC0_B12/NVM_TM0/FC1_P4/FC0_P0/CT0_MAT2/FLEXIO0_D4
P0_13/ADC0_B13/NVM_TM1/FC1_P5/FC0_P1/CT0_MAT3/FLEXIO0_D5
P0_14/ADC0_B14/NVM_TM2/FC1_P6/FC0_P2/CT_INP2/UTICK_CAP0/FLEXIO0_D6
P0_15/ADC0_B15/NVM_TM3/FC0_P3/CT_INP3/UTICK_CAP1/FLEXIO0_D7
P0_16/TSI0_CH11/ADC0_A8/FC0_P0/CT0_MAT0/UTICK_CAP2/FLEXIO0_D0/PDM0_CLK/I3C0_SDA/TP_HRESP/WUU0_IN2
P0_17/TSI0_CH12/ADC0_A9/FC0_P1/CT0_MAT1/UTICK_CAP3/FLEXIO0_D1/PDM0_DATA0/I3C0_SCL/TP_HREADY
P0_18/TSI0_CH13/ADC0_A10/EWM0_IN/FC0_P2/CT0_MAT2/FLEXIO0_D2/HSCMP0_OUT/PDM0_DATA1
P0_19/TSI0_CH14/ADC0_A11/EWM0_OUT_b/FC0_P3/CT0_MAT3/FLEXIO0_D3/HSCMP1_OUT/WUU0_IN3
P0_20/TSI0_CH15/ADC0_A12/FC0_P4/FC1_P0/CT_INP0/FLEXIO0_D4/I3C0_SDA/WUU0_IN4
P0_21/TSI0_CH16/ADC0_A13/FC0_P5/FC1_P1/CT_INP1/FLEXIO0_D5/I3C0_SCL
P0_22/ADC0_A14/CMP1_IN2/EWM0_IN/FC0_P6/FC1_P2/CT_INP2/FLEXIO0_D6/I3C0_PUR
P0_23/ADC0_A15/CMP2_IN2/EWM0_OUT_b/FC1_P3/CT_INP3/FLEXIO0_D7/WUU0_IN5
P0_24/ADC0_B16/FC1_P0/CT0_MAT0
P0_25/ADC0_B17/FC1_P1/CT0_MAT1
P0_26/ADC0_B18/FC1_P2/CT0_MAT2
P0_27/ADC0_B19/FC1_P3/CT0_MAT3
P0_28/ADC0_B20/FC1_P4/FC0_P4/CT_INP0
P0_29/ADC0_B21/FC1_P5/FC0_P5/CT_INP1
P0_30/ADC0_B22/FC1_P6/FC0_P6/CT_INP2
P0_31/ADC0_B23/CT_INP3

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U5B
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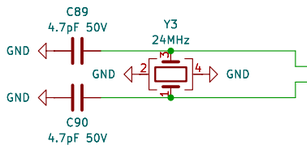

P1_0/FC3_P0	C6
P1_1/FC3_P1	C5
P1_2/FC3_P2	C4
P1_3/FC3_P3	B4
P1_4/ENET0_REFCLK	A4
P1_5/ENET0_TXEN	B3
P1_6/ENET0_TXD0	B2
P1_7/ENET0_TXD1	A2
P1_8/I3C1_SDA/FC4_P0	A1
P1_9/I3C1_SCL/FC4_P1	B1
P1_10/ENET0_TXER	C3
P1_11	D3
P1_12/ENET0_RXER	D2
P1_13/ENET0_RXDV	D1
P1_14/ENET0_RXD0	D4
P1_15/ENET0_RXD1	E4
P1_16/FC3_P4	F6
P1_17/FC3_P5	F4
P1_18/FC3_P6	G4
P1_19/ENET0_INT_N	G5
P1_20/ENET0_MDC	K5
P1_21/ENET0_MDIO	L5
P1_22/FC4_P2	L4
P1_23/FC4_P3	M4
XTAL48M	F1
EXTAL48M	F2

P1_0/TSI0_CH0/ADC0_A16/CMP0_IN0/TRIG_IN0/FC3_P0/FC4_P4/CT_INP4/SCT0_OUT6/FLEXIO0_D8/SAI1_TX_BCLK/WUU0_IN6/LPTMR0_ALT3
P1_1/TSI0_CH1/ADC0_A17/CMP1_IN0/TRIG_IN1/FC3_P1/FC4_P5/CT_INP5/SCT0_OUT7/FLEXIO0_D9/SAI1_TX_FS/NVM_SDO
P1_2/TSI0_CH2/ADC0_A18/CMP2_IN0/TRIG_OUT0/FC3_P2/FC4_P6/CT1_MAT0/SCT0_IN6/FLEXIO0_D10/ENET0_MDC/SAI1_TXD0/CAN0_TXD/USB0_OBE_TXDATA_b_TEST/ADC1_CONV_CLK
P1_3/TSI0_CH3/ADC0_A19/CMP0_IN1/TRIG_OUT1/FC3_P3/CT1_MAT1/SCT0_IN7/FLEXIO0_D11/ENET0_MDIO/SAI1_RXD0/CAN0_RXD/TP_HTRANS/WUU0_IN7
P1_4/TSI0_CH4/ADC0_A20/CMP0_IN2/FREQME_CLK_IN0/FC3_P4/FC5_P0/CT1_MAT2/SCT0_OUT0/FLEXIO0_D12/EZH_PIO0/ENET0_TX_CLK/SAI0_TXD1/USB0_IND_RXDM_TEST/ADC1_CONV_DATA0/WUU0_IN8
P1_5/TSI0_CH5/ADC0_A21/CMP0_IN3/FREQME_CLK_IN1/FC3_P5/FC5_P1/CT1_MAT3/SCT0_OUT1/FLEXIO0_D13/EZH_PIO1/ENET0_TXEN/SAI0_RXD1/USB0_IND_RXDP_TEST/ADC1_CONV_DATA1
P1_6/TSI0_CH6/ADC0_A22/TRIG_IN2/FC3_P6/FC5_P2/CT_INP6/SCT0_IN0/FLEXIO0_D14/EZH_PIO2/ENET0_TXD0/SAI1_RX_BCLK/CAN1_TXD/USB0_IND_RXDIFF_TEST/ADC1_CONV_DATA2
P1_7/TSI0_CH7/ADC0_A23/TRIG_OUT2/FC5_P3/CT_INP7/SCT0_IN1/FLEXIO0_D15/EZH_PIO3/PLU_CLK/ENET0_TXD1/SAI1_RX_FS/CAN1_RXD/USB0_DO_TXDATA_TEST/ADC1_CONV_DATA3/WUU0_IN9
P1_8/TSI0_CH17/ADC1_A8/TRACE_DATA0/FC4_P0/FC5_P4/CT_INP8/SCT0_OUT2/FLEXIO0_D16/EZH_PIO4/PLU_OUT0/ENET0_TXD2/I3C1_SDA/TP_DATA0/WUU0_IN10/LPTMR1_ALT3
P1_9/TSI0_CH18/ADC1_A9/TRACE_DATA1/FC4_P1/FC5_P5/CT_INP9/SCT0_OUT3/FLEXIO0_D17/EZH_PIO5/PLU_OUT1/ENET0_TXD3/I3C1_SCL/TP_DATA1
P1_10/TSI0_CH19/ADC1_A10/TRACE_DATA2/FC4_P2/FC5_P6/CT2_MAT0/SCT0_IN2/FLEXIO0_D18/EZH_PIO6/PLU_IN0/ENET0_TXER/CAN0_TXD/TP_DATA2
P1_11/TSI0_CH20/ADC1_A11/TRACE_DATA3/FC4_P3/CT2_MAT1/SCT0_IN3/FLEXIO0_D19/EZH_PIO7/PLU_IN1/ENET0_RX_CLK/I3C1_PUR/CAN0_RXD/TP_DATA3/WUU0_IN11
P1_12/TSI0_CH21/ADC1_A12/TRACE_CLK/FC4_P4/FC3_P0/CT2_MAT2/SCT0_OUT4/FLEXIO0_D20/EZH_PIO8/PLU_OUT2/ENET0_RXER/CAN1_RXD/USB0_PUE_PULLDWN_DP_TEST/ADC1_CONV_DATA4/WUU0_IN12
P1_13/TSI0_CH22/ADC1_A13/TRIG_IN3/FC4_P5/FC3_P1/CT2_MAT3/SCT0_OUT5/FLEXIO0_D21/EZH_PIO9/PLU_OUT3/ENET0_RXDV/CAN1_TXD/USB0_OBE_TXBIAS_b_TEST/ADC1_CONV_DATA5
P1_14/TSI0_CH23/ADC1_A14/FC4_P6/FC3_P2/CT_INP10/SCT0_IN4/FLEXIO0_D22/EZH_PIO10/PLU_IN2/ENET0_RXD0/USB0_DO_TXSZERO_TEST/ADC1_CONV_DATA6
P1_15/TSI0_CH24/ADC1_A15/FC3_P3/CT_INP11/SCT0_IN5/FLEXIO0_D23/EZH_PIO11/PLU_IN3/ENET0_RXD1/I3C1_PUR/USB0_SRE_LOWSPEED_TEST/ADC1_CONV_DATA7/WUU0_IN13
P1_16/ADC1_A16/FC5_P0/FC3_P4/CT_INP12/SCT0_OUT6/FLEXIO0_D24/EZH_PIO12/PLU_OUT4/ENET0_RXD2/I3C1_SDA/WUU0_IN14
P1_17/ADC1_A17/FC5_P1/FC3_P5/CT_INP13/SCT0_OUT7/FLEXIO0_D25/EZH_PIO13/PLU_OUT5/ENET0_RXD3/I3C1_SCL
P1_18/ADC1_A18/FREQME_CLK_IN0/FC5_P2/FC3_P6/CT3_MAT0/SCT0_IN6/FLEXIO0_D26/EZH_PIO14/PLU_IN4/ENET0_COL/CAN0_TXD
P1_19/ADC1_A19/FREQME_CLK_IN1/FC5_P3/CT3_MAT1/SCT0_IN7/FLEXIO0_D27/EZH_PIO15/PLU_IN5/ENET0_CRS/CAN0_RXD/WUU0_IN15
P1_20/ADC1_A20/CMP1_IN3/TRIG_IN2/FC5_P4/FC4_P0/CT3_MAT2/SCT0_OUT8/FLEXIO0_D28/EZH_PIO16/PLU_OUT6/ENET0_MDC/CAN1_TXD
P1_21/ADC1_A21/CMP2_IN3/TRIG_OUT2/FC5_P5/FC4_P1/CT3_MAT3/SCT0_OUT9/FLEXIO0_D29/EZH_PIO17/PLU_OUT7/ENET0_MDIO/SAI1_MCLK/CAN1_RXD
P1_22/ADC1_A22/TRIG_IN3/FC5_P6/FC4_P2/CT_INP14/SCT0_OUT4/FLEXIO0_D30/EZH_PIO18
P1_23/ADC1_A23/FC4_P3/CT_INP15/SCT0_OUT5/FLEXIO0_D31/EZH_PIO19
P1_30/XTAL48M/TRIG_OUT3/CT_INP16/SCT0_OUT8/SAI0_MCLK
P1_31/EXTAL48M/TRIG_IN4/CT_INP17/SCT0_OUT9

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P2_0/SDHC0_D5	H2
P2_1/SDHC0_D4	H1
P2_2/SDHC0_D1	H3
P2_3/SDHC0_D0	J3
P2_4/SDHC0_CLK	K3
P2_5/SDHC0_CMD	K1
P2_6/SDHC0_D3	K2
P2_7/SDHC0_D2	L2
P2_8/SDHC0_D7	M2
P2_9/SDHC0_D6	M1
P2_10/TRACE_DATA2	M3
P2_11/TRACE_DATA3	N4

P2_0/TRIG_IN5/FC9_P6/SDHC0_D5/SCT0_IN0/PWM1_A3/FLEXIO0_D8/EZH_PIO20/FLEXSPI0_B_SS1_b/SAI0_RX_BCLK/ESPI0_RST
P2_1/TRACE_CLK/SDHC0_D4/SCT0_IN1/PWM1_B3/FLEXIO0_D9/EZH_PIO21/FLEXSPI0_B_DQS/SINC0_MCLK_OUT0/SAI0_RX_FS/ESPI0_NOTIFY
P2_2/CLKOUT/FC9_P3/SDHC0_D1/SCT0_OUT0/PWM1_A2/FLEXIO0_D10/EZH_PIO22/FLEXSPI0_B_SS0_b/SINC0_MCLK0/SAI0_TXD0/ESPI0_CSn/USB0_IBE_RXDIFF_b_TEST/WUU0_IN16
P2_3/FC9_P1/SDHC0_D0/SCT0_OUT1/PWM1_B2/FLEXIO0_D11/EZH_PIO23/FLEXSPI0_B_SCLK/SINC0_MBIT0/SAI0_RXD0/ESPI0_CLK/USB0_PUE_PULLDWN_DM_TEST
P2_4/FC9_P0/SDHC0_CLK/SCT0_OUT2/PWM1_A1/FLEXIO0_D12/EZH_PIO24/FLEXSPI0_B_DATA0/SINC0_MCLK1/SAI0_RXD1/ESPI0_DATA0/USB0_PUE_PULLUP_DP_TEST/WUU0_IN17
P2_5/TRIG_OUT3/FC9_P2/SDHC0_CMD/SCT0_OUT3/PWM1_B1/FLEXIO0_D13/EZH_PIO25/FLEXSPI0_B_DATA1/SINC0_MBIT1/SAI0_TXD1/ESPI0_DATA1/USB0_SRE_LOWSPEED_TEST
P2_6/TRIG_IN4/FC9_P4/SDHC0_D3/SCT0_OUT4/PWM1_A0/FLEXIO0_D14/EZH_PIO26/FLEXSPI0_B_DATA2/SINC0_MCLK2/SAI0_TX_BCLK/ESPI0_DATA2/USB0_PUIMPSEL_PULLUP_DP_TEST
P2_7/TRIG_IN5/FC9_P5/SDHC0_D2/SCT0_OUT5/PWM1_B0/FLEXIO0_D15/EZH_PIO27/FLEXSPI0_B_DATA3/SINC0_MBIT2/SAI0_TX_FS/ESPI0_DATA3/USB1_TSTO_PLL_OUT_DIV
P2_8/TRACE_DATA0/SDHC0_D7/SCT0_IN2/PWM1_X0/FLEXIO0_D16/EZH_PIO28/FLEXSPI0_B_DATA4/SINC0_MCLK3/SAI1_TXD0
P2_9/TRACE_DATA1/SDHC0_D6/SCT0_IN3/PWM1_X1/FLEXIO0_D17/EZH_PIO29/FLEXSPI0_B_DATA5/SINC0_MBIT3/SAI1_RXD0
P2_10/TRACE_DATA2/SCT0_IN4/PWM1_X2/FLEXIO0_D18/EZH_PIO31/FLEXSPI0_B_DATA6/SINC0_MCLK4/SAI1_RXD1
P2_11/TRACE_DATA3/SCT0_IN5/PWM1_X3/FLEXIO0_D19/EZH_PIO30/FLEXSPI0_B_DATA7/SINC0_MBIT4/SAI1_TXD1

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DESIGNER: YOURI TILS
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Sheet: /MCU IO Part 1/
File: mcu_io_1.kicad_sch

Title: MR-MCXN-T1 Sensor hub

Size: A3	Date: 2025-01-17	**Rev: X0**
KiCad E.D.A. 8.0.8		Id: 3/9

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P3_0/SmartDMA_PIO0	B17
P3_1/FC6_P0	C15
P3_2/FC7_P0	D15
P3_3/FC7_P1	D16
P3_4/FC7_P2	F14
P3_5/FC7_P3	G14
P3_6/FC6_P1	D17
P3_7/SmartDMA_PIO7	D14
P3_8/SmartDMA_PIO8	E14
P3_9/SmartDMA_PIO9	F15
P3_10/FC6_P2	F17
P3_11/FC6_P3	F16
P3_12/FC7_P4	G16
P3_13/FC6_P5	H16
P3_14/FC8_P0	H17
P3_15/FC8_P1	H15
P3_16/FC8_P2	J15
P3_17/FC8_P3	K15
P3_18/FC6_P6	K16
P3_19/FC7_P6	K17
P3_20	M17
P3_21/FLEXIO0_D29	L16
P3_22/FC8_P6	M16
P3_23	M15

P3_0/TRIG_IN0/FC7_P3/CT_INP16/PWM0_A0/FLEXIO0_D8/EZH_PIO0/FLEXSPI0_A_SS0_b/PF_QSPI_CS0_DIS/TP_HWRITE/WUU0_IN22
P3_1/TRIG_IN1/FC6_P0/FC7_P6/CT_INP17/PWM0_B0/FLEXIO0_D9/EZH_PIO1/FLEXSPI0_A_SS1_b/PF_QSPI_CS1_DIS/FREQME_CLK_OUT0
P3_2/FC7_P0/CT4_MAT0/PWM0_X0/FLEXIO0_D10/EZH_PIO2/SIM1_PD
P3_3/FC7_P1/CT4_MAT1/PWM0_X1/FLEXIO0_D11/EZH_PIO3/SIM1_RST
P3_4/FC7_P2/CT_INP18/PWM0_X2/FLEXIO0_D12/EZH_PIO4/SIM1_CLK
P3_5/FC7_P3/CT_INP19/PWM0_X3/FLEXIO0_D13/EZH_PIO5/SIM1_IO
P3_6/CLKOUT/FC6_P1/CT4_MAT2/PWM0_A1/FLEXIO0_D14/EZH_PIO6/FLEXSPI0_A_DQS/SIM1_VCCEN/SAI1_MCLK/PF_QSPI_CS_n/FREQME_CLK_OUT1/ADC0_CONV_CLK
P3_7/FC6_P6/FC7_P1/CT4_MAT3/PWM0_B1/FLEXIO0_D15/EZH_PIO7/FLEXSPI0_A_SCLK/SIM0_VCCEN/SAI0_MCLK/PF_QSPI_SCKIN/TP_LOAD_EN
P3_8/FC6_P4/FC7_P0/CT_INP4/PWM0_A2/FLEXIO0_D16/EZH_PIO8/FLEXSPI0_A_DATA0/SIM0_PD/SAI0_TX_BCLK/PF_QSPI_DATA0/TP_ADDR0/WUU0_IN23
P3_9/FC6_P5/FC7_P2/CT_INP5/PWM0_B2/FLEXIO0_D17/EZH_PIO9/FLEXSPI0_A_DATA1/SIM0_RST/SAI0_TX_FS/PF_QSPI_DATA1/TP_ADDR1
P3_10/FC6_P2/FC7_P4/CT1_MAT0/PWM0_A3/FLEXIO0_D18/EZH_PIO10/FLEXSPI0_A_DATA2/SIM0_CLK/SAI0_TXD0/PF_QSPI_DATA2/USB1_TSTI_TX_HS_MODE/TP_ADDR2
P3_11/FC6_P3/FC7_P5/CT1_MAT1/PWM0_B3/FLEXIO0_D19/EZH_PIO11/FLEXSPI0_A_DATA3/SIM0_IO/SAI0_RXD0/PF_QSPI_DATA3/USB1_TSTI_TX_LS_EN/TP_ADDR3/WUU0_IN24
P3_12/FC7_P4/FC6_P4/CT1_MAT2/PWM1_A0/FLEXIO0_D20/EZH_PIO12/FLEXSPI0_A_DATA4/SAI0_RXD1/USB1_TSTI_TX_ENAB/ADC0_CONV_DATA0
P3_13/FC7_P5/FC6_P5/CT1_MAT3/PWM1_B0/FLEXIO0_D21/EZH_PIO13/FLEXSPI0_A_DATA5/SAI0_TXD1/PF_SPI_CS0_n/USB1_TSTI_TX_HIZ/ADC0_CONV_DATA1
P3_14/FC8_P0/CT_INP6/PWM1_A1/FLEXIO0_D22/EZH_PIO14/FLEXSPI0_A_DATA6/SAI0_RX_BCLK/PF_SPI_DATA/USB1_TSTI_TX_DP/ADC0_CONV_DATA2/WUU0_IN25
P3_15/FC8_P1/CT_INP7/PWM1_B1/FLEXIO0_D23/EZH_PIO15/FLEXSPI0_A_DATA7/SAI0_RX_FS/PF_SPI_SCKIN/USB1_TSTI_TX_DN/ADC0_CONV_DATA3
P3_16/FC8_P2/CT_INP8/PWM1_A2/FLEXIO0_D24/EZH_PIO16/SIM0_CLK/SAI1_TX_BCLK/USB1_TSTO_RX_FS_RXD/ADC0_CONV_DATA4
P3_17/FC8_P3/CT_INP9/PWM1_B2/FLEXIO0_D25/EZH_PIO17/SIM0_IO/SAI1_TX_FS/USB1_TSTO_RX_HS_RXD/ADC0_CONV_DATA5/WUU0_IN26
P3_18/FC6_P6/CT2_MAT0/PWM1_X0/FLEXIO0_D26/EZH_PIO18/SAI1_RX_BCLK
P3_19/FC7_P6/CT2_MAT1/PWM1_X1/FLEXIO0_D27/EZH_PIO19/SAI1_RX_FS
P3_20/TRIG_OUT0/FC8_P4/FC6_P0/CT2_MAT2/PWM1_A3/FLEXIO0_D28/EZH_PIO20/SIM0_PD/SAI1_TXD0/PF_SPI_CS0_DIS_n/USB1_TSTO_RX_DISCON_DET/ADC0_CONV_DATA6/WUU0_IN27
P3_21/TRIG_OUT1/FC8_P5/FC6_P1/CT2_MAT3/PWM1_B3/FLEXIO0_D29/EZH_PIO21/SIM0_RST/SAI1_RXD0/PF_SPI_CS1_DIS_n/USB1_TSTO_RX_SQUELCH/ADC0_CONV_DATA7
P3_22/FC8_P6/FC6_P2/CT_INP10/PWM1_X2/FLEXIO0_D30/EZH_PIO22/SIM0_VCCEN/SAI1_RXD1
P3_23/FC6_P3/CT_INP11/PWM1_X3/FLEXIO0_D31/EZH_PIO23/SAI1_TXD1

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MCXN947VDFT

P4_0/FC2_P0	P1
P4_1/FC2_P1	P2
P4_2/FC2_P2	T1
P4_3/FC2_P3	U1
P4_4	M6
P4_5	M8
P4_6	N7
P4_7	T4
P4_12/CAN0_RXD	T6
P4_13/CAN0_TXD	T7
P4_14	N8
P4_15/CAN1_RXD	T8
P4_16/CAN1_TXD	R8
P4_17	R9
P4_18	N10
P4_19	R10
P4_20/FC2_P4	T10
P4_21	T11
P4_22	T12
P4_23/FC2_P6	U12

P4_0/TRIG_IN6/FC2_P0/CT_INP16/EZH_PIO24/PLU_IN0/SINC0_MCLK3/WUU0_IN18
P4_1/TRIG_IN7/FC2_P1/CT_INP17/EZH_PIO25/PLU_IN1
P4_2/DAC0_OUT/ADC0_A4/ADC1_A4/CMP0_IN4N/CMP1_IN4N/CMP2_IN4N/TRIG_IN6/FC2_P2/CT_INP12/EZH_PIO26/PLU_IN2/SINC0_MBIT3
P4_3/DAC1_OUT/ADC0_B4/ADC1_B4/CMP0_IN5N/CMP1_IN5N/CMP2_IN5N/TRIG_IN7/FC2_P3/CT_INP13/EZH_PIO27/PLU_IN3/WUU0_IN19
P4_4/FC2_P4/CT_INP14/EZH_PIO28/PLU_IN4/SINC0_MCLK4
P4_5/FC2_P5/CT_INP15/EZH_PIO29/PLU_IN5/SINC0_MBIT4
P4_6/TRIG_OUT4/FC2_P6/CT_INP18/EZH_PIO30/PLU_CLK
P4_7/CT_INP19/EZH_PIO31
P4_12/OPAMP0_INP0/ADC0_A5/ADC1_A5/USB0_VBUS_DET/FC2_P0/CT4_MAT0/FLEXIO0_D20/PLU_OUT0/SINC0_MCLK0/CAN0_RXD/MTR_START_BURNIN/WUU0_IN20
P4_13/OPAMP0_INP1/ADC0_B5/ADC1_B5/TRIG_IN8/FC2_P1/USB1_ID/CT4_MAT1/FLEXIO0_D21/PLU_OUT1/SINC0_MBIT0/CAN0_TXD
P4_14/CT4_MAT2/FLEXIO0_D22/PLU_OUT2
P4_15/OPAMP0_OUT/ADC0_A1/CMP0_IN4P/TRIG_OUT4/USB1_VBUS_DIG/CT4_MAT3/FLEXIO0_D23/PLU_OUT3/SINC0_MCLK_OUT0/CAN1_RXD/WUU0_IN21
P4_16/OPAMP1_INP0/ADC0_A6/FC2_P2/USB1_OTG_PWR/CT3_MAT0/FLEXIO0_D24/PLU_OUT4/SINC0_MCLK1/CAN1_TXD
P4_17/OPAMP1_INP1/ADC0_B6/TRIG_IN9/FC2_P3/USB1_OTG_OC/CT3_MAT1/FLEXIO0_D25/PLU_OUT5/SINC0_MBIT1
P4_18/CT3_MAT2/FLEXIO0_D26/PLU_OUT6
P4_19/OPAMP1_OUT/ADC0_B1/CMP1_IN4P/TRIG_OUT5/CT3_MAT3/FLEXIO0_D27/PLU_OUT7/SINC0_MCLK_OUT1
P4_20/OPAMP2_INP0/ADC1_A6/TRIG_IN8/FC2_P4/CT2_MAT0/FLEXIO0_D28/SINC0_MCLK2
P4_21/OPAMP2_INP1/ADC1_B6/TRIG_IN9/FC2_P5/CT2_MAT1/FLEXIO0_D29/SINC0_MBIT2
P4_22/CT2_MAT2/FLEXIO0_D30
P4_23/OPAMP2_OUT/ADC0_A2/ADC0_B2/ADC1_B3/CMP2_IN4P/TRIG_OUT5/FC2_P6/CT2_MAT3/FLEXIO0_D31/SINC0_MCLK_OUT2

C88
4.7pF 50V
GND
Y2
32.768kHz
GND
C87
4.7pF 50V

P5_0/EXTAL32K	U16
P5_1/XTAL32K	U17
P5_2	M10
P5_3	N11
P5_4	M12
P5_5	K12
P5_6	K13
P5_7	L13
P5_8	L14
P5_9	M14

P5_0/EXTAL32K/ADC1_B8/TRIG_IN10/LPTMR0_ALT2
P5_1/XTAL32K/ADC1_B9/TRIG_OUT6/LPTMR1_ALT2
P5_2/ADC1_B10/VBAT_WAKEUP_b/SPC_LPREQ/TAMPER0
P5_3/ADC1_B11/TRIG_IN11/RTC_CLKOUT/TAMPER1
P5_4/ADC1_B12/TRIG_OUT7/SPC_LPREQ/TAMPER2
P5_5/ADC1_B13/TRIG_IN10/LPTMR0_ALT2/TAMPER3
P5_6/ADC1_B14/TRIG_OUT6/LPTMR1_ALT2/TAMPER4
P5_7/ADC1_B15/TRIG_IN11/TAMPER5
P5_8/ADC1_B16/TRIG_OUT7/TAMPER6
P5_9/ADC1_B17/TAMPER7

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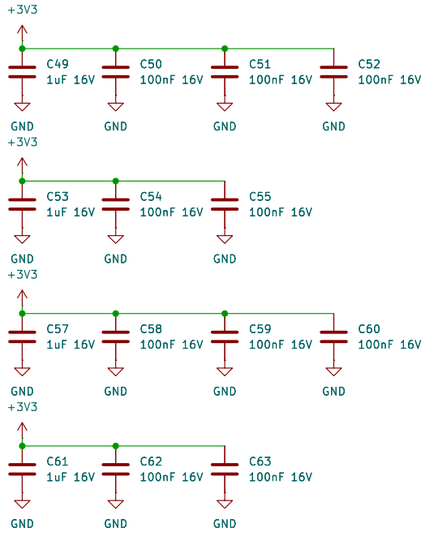
CLASSIFICATION: INTERNAL USE ONLY

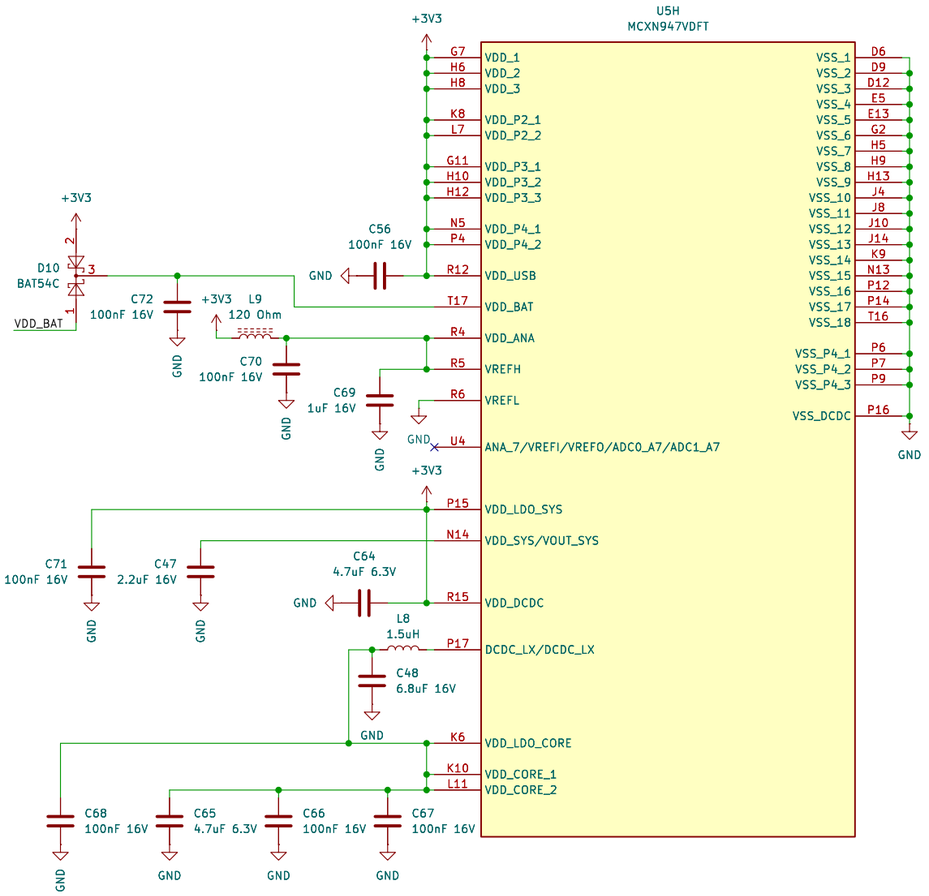
DESIGNER: YOURI TILS
CTO SYSTEM INNOVATIONS / MOBILE ROBOTICS DOMAIN
NXP SEMICONDUCTORS B.V.

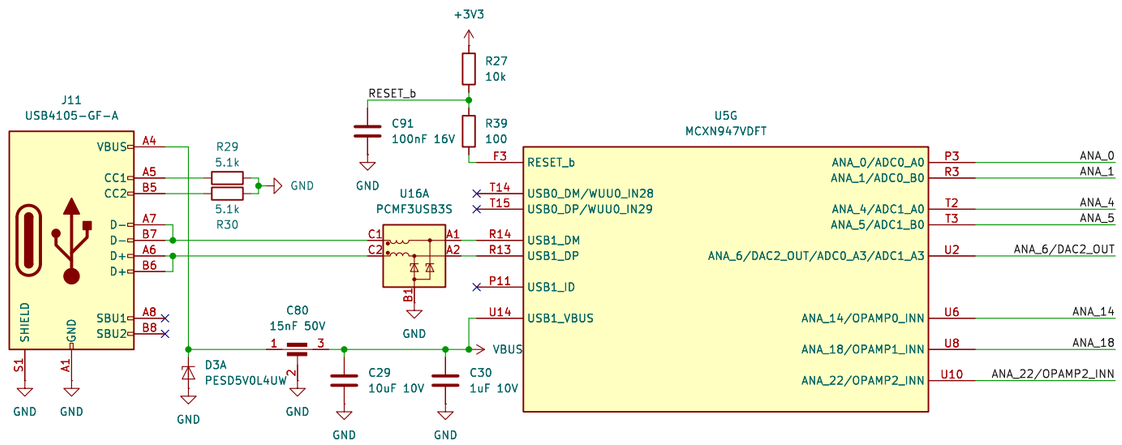
Sheet: /MCU IO Part 2/
File: mcu_io_2.kicad_sch

Title: MR-MCXN-T1 Sensor hub

Size: A3	Date: 2025-01-17	**Rev: X0**
KiCad E.D.A. 8.0.8		Id: 4/9







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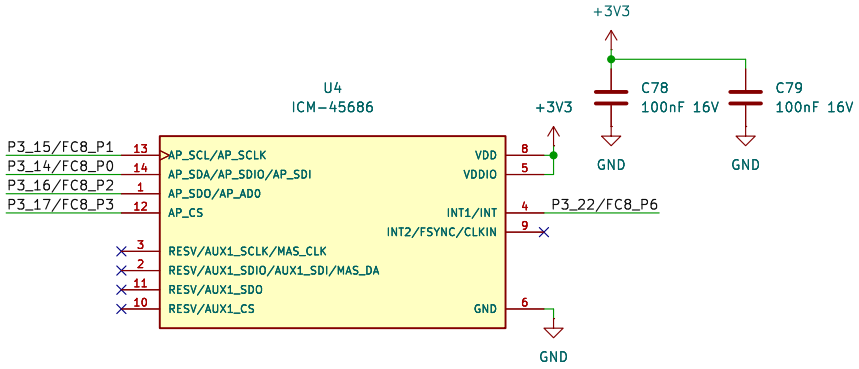
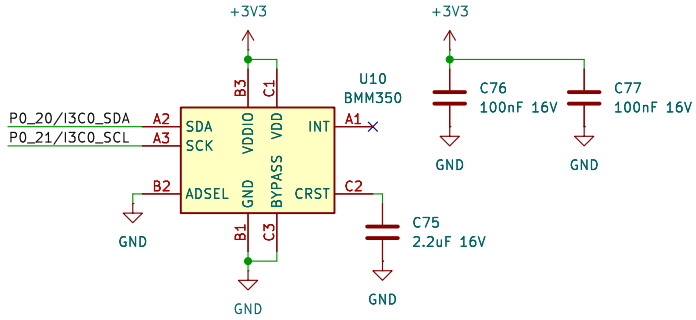
NXP SEMICONDUCTORS B.V.

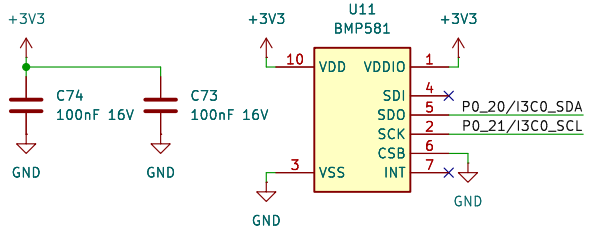
Sheet: /MCU IO USB & Power/
File: mcu_usb_power.kicad_sch

Title: MR-MCXN-T1 Sensor hub

Size: A3	Date: 2025-01-17	**Rev: X0**
KiCad E.D.A. 8.0.8		Id: 5/9







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DESIGNER: YOURI TILS
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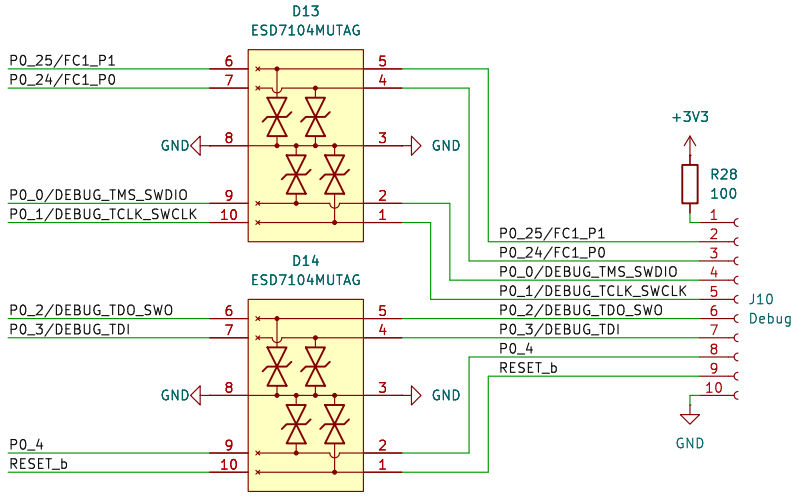
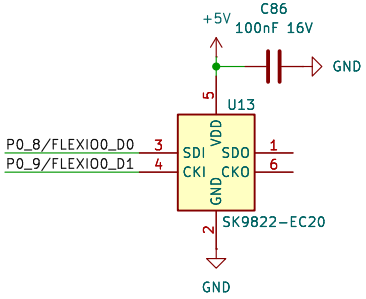
NXP SEMICONDUCTORS B.V.

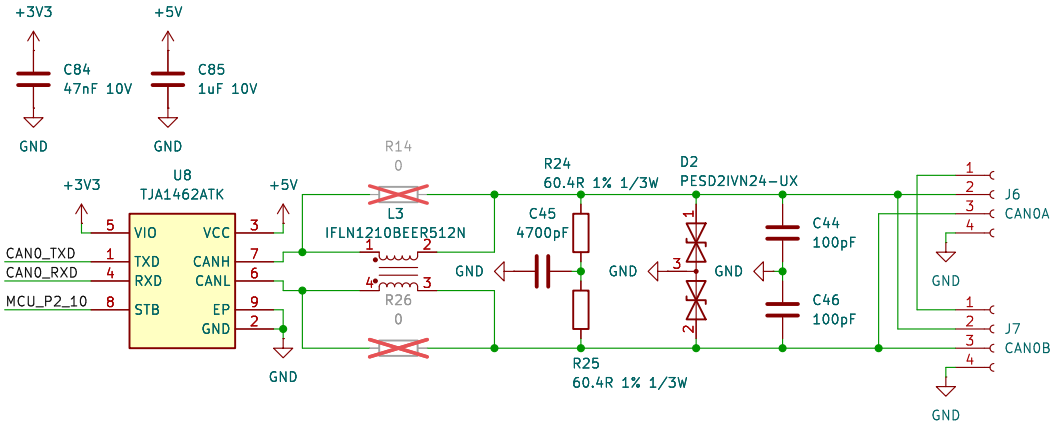
Sheet: /Sensors/
File: sensors.kicad_sch

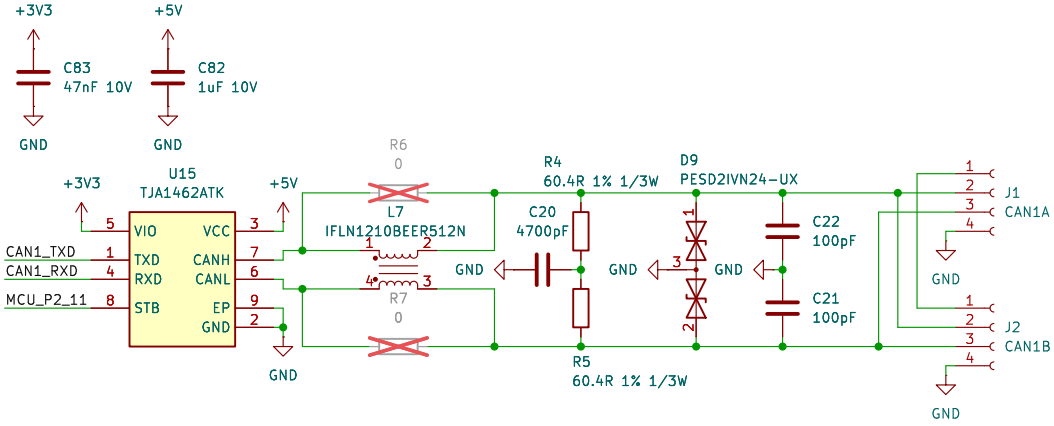
Title: MR-MCXN-T1 Sensor hub

Size: A4	Date: 2025-01-17	**Rev: X0**
KiCad E.D.A. 8.0.8		Id: 6/9









CLASSIFICATION: INTERNAL USE ONLY

DESIGNER: YOURI TILS
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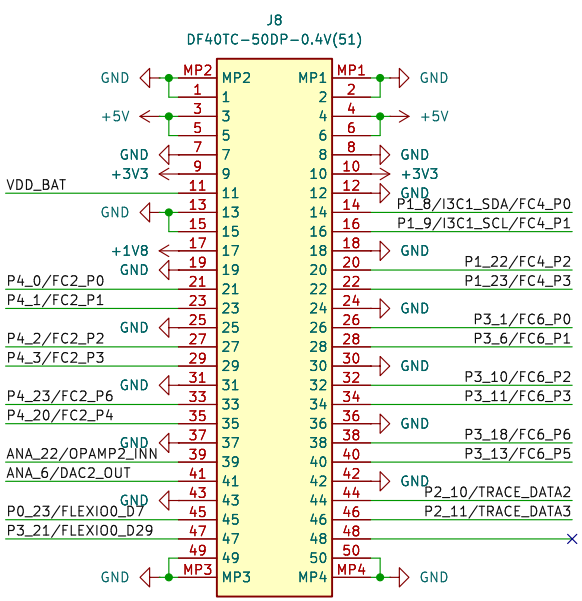
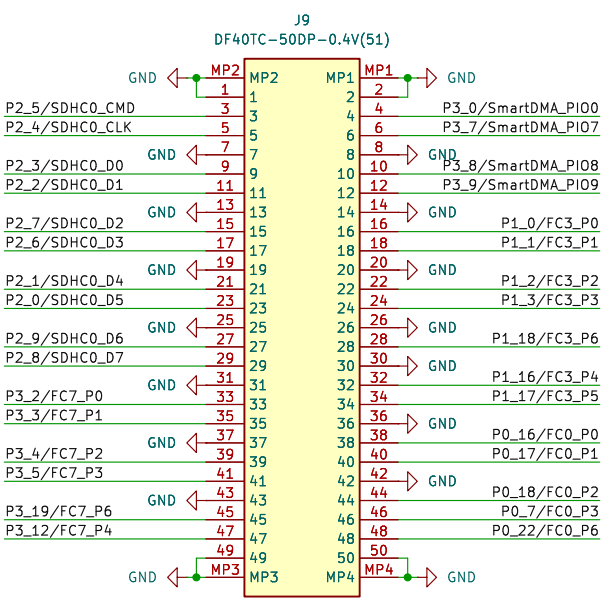
Sheet: /Communication/
File: communication.kicad_sch

Title: MR-MCXN-T1 Sensor hub

Size: A4	Date: 2025-01-17	**Rev: X0**
KiCad E.D.A. 8.0.8		Id: 7/9



300mA max per pin
5V = 1A max
3V3 = 500mA max
1V8 = 200A max



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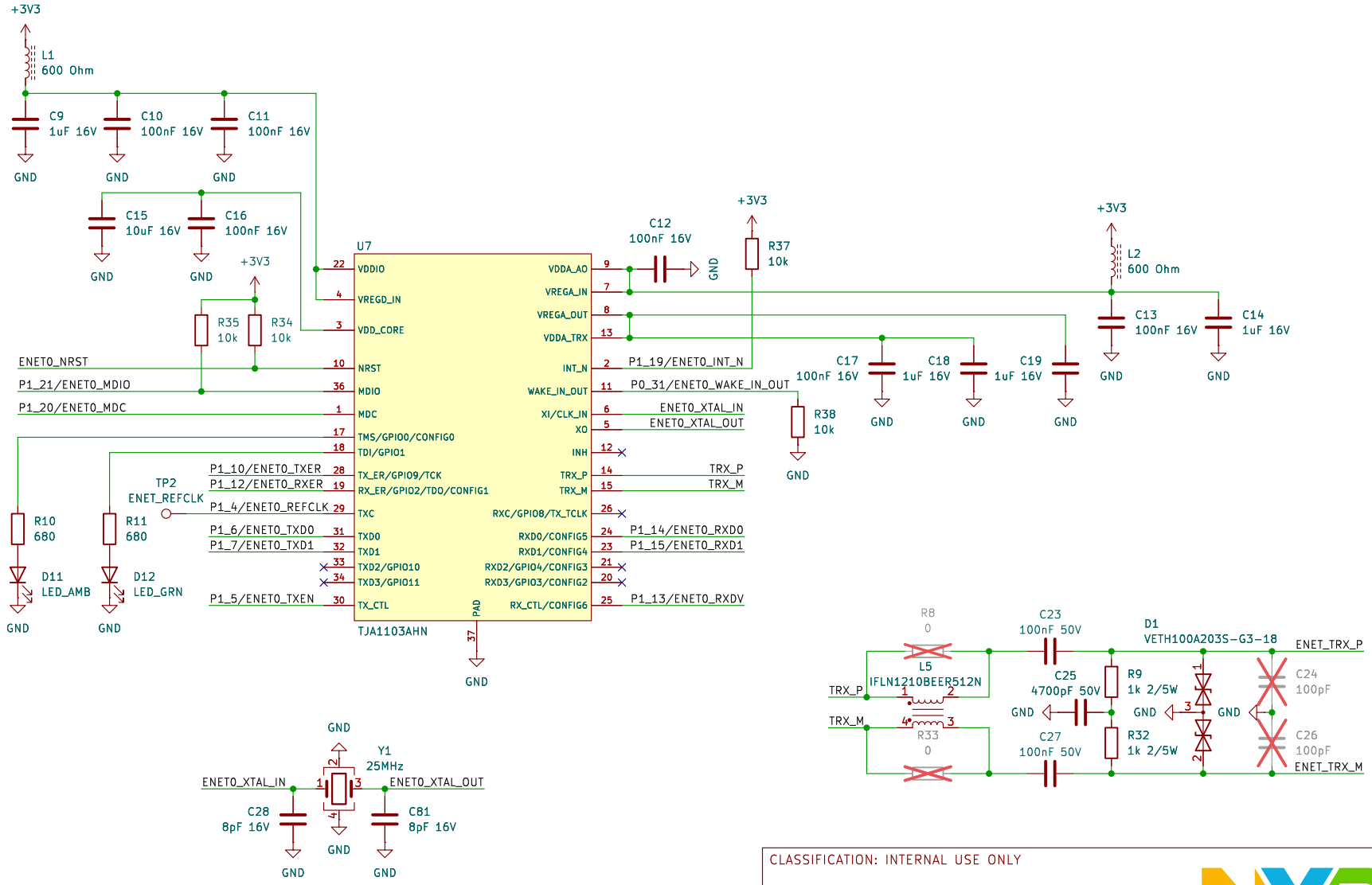
DESIGNER: YOURI TILS
CTO SYSTEM INNOVATIONS / MOBILE ROBOTICS DOMAIN
NXP SEMICONDUCTORS B.V.

Sheet: /Board-to-Board/
File: board-to-board.kicad_sch

Title: MR-MCXN-T1 Sensor hub

Size: A4	Date: 2025-01-17	**Rev: X0**
KiCad E.D.A. 8.0.8		Id: 8/9



CLASSIFICATION: INTERNAL USE ONLY

DESIGNER: YOURI TILS
CTO SYSTEM INNOVATIONS / MOBILE ROBOTICS DOMAIN
NXP SEMICONDUCTORS B.V.

Sheet: /Ethernet PHY/
File: ethernet_phy.kicad_sch

Title: MR-MCXN-T1 Sensor hub

Size: A4	Date: 2025-01-17	**Rev: X0**
KiCad E.D.A. 8.0.8		Id: 9/9